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ABSTRACT

The present experiment was an attempt to extend a new reinforcement paradigm to attitude change concerning labor unions. Rather than having reinforcers contingent upon critical responses, they were simply correlated with the critical response. The 8 adjective pairs from the evaluative scale of the semantic differential (and 4 buffer pairs) were presented verbally by real subjects to confederate subjects 5 times in random order. There were 4 experimental groups: subjects who, as "experimenters," were trying to influence their (confederate) subjects to a more positive evaluation of labor unions by the way they verbally presented adjective pairs; subjects who were trying to influence to a more negative evaluation; the difference between these first 2 and the other 2 (control) groups was that the latter were only monitors not trying to influence their respective subjects. The sessions were concluded with an interview to determine awareness. The post-experiment interview data confirmed the lack of awareness and the effectiveness of reinforcement via their subjective feelings of success as an experimenter. (Author/RK)

## The Response-Related Reinforcement of Attitudes

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The present experiment was an attempt to extend a new reinforcement paradigm to attitude change regarding labor unions. This new reinforcement class, called response-related reinforcement, does not involve a contingent relationship between the reinforcing stimulus and the critical response, but rather it involves, incidentally, an appropriate temporal relationship. That is, the contingent reinforcement of one response also reinforces a second response, actually the response of interest, which incidentally occurs at about the same time. The effectiveness of response-related reinforcement has been demonstrated with both intentional and incidental learning of verbal materials in several studies.

An attempt to extend it to attitude modification was seen as a test of the generality of response-related reinforcement. Too, it was seen as offering a possible alternative, or at least adjunctive, theoretical base for attitude modification in essentially role-playing situations, and as having paradigmatic implications for attitude-change research.

The attitude scale used consisted of eight bi-polar adjective pairs having factor loadings greater than .80 on the evaluative dimension of the semantic differential, as reported by Osgood, Suci, and Tannenbaum, plus four "buffer" items having high loadings on the potency dimension but low loadings on the evaluative dimension.

All conditions required three people: the real subject, who was told he was serving as an experimenter; a pseudo-subject or confederate of the real experimenter, whose responses the apparent experimenter was told to monitor; and the real experimenter. There were four groups, including subjects who, as apparent experimenters, were trying to move their subject (actually the confederate) to a more positive view of labor unions by the way they verbally presented the adjective pairs and subjects who, again as apparent experimenters, were trying to move the confederate to a more negative view of labor unions. Thus, these groups were exposed to response-correlated reinforcement. The response upon which reinforcement was contingent was their serving as "good" experimenters. The response with which reinforcement was correlated was change in their own attitudes. There were also two control groups, one exposed to positive movement by the confederate, and one to negative movement. They, too, were told that they were serving as experimenters, but they were simply to monitor the confederate's responses. Nothing was said of a "good" experimenter's influencing another person's responses, and thus, these subjects were not exposed to response-correlated reinforcement. With the exception of the reinforcement contingency, all subjects received identical instructions, with no mention being made specifically of positivity or negativity nor of the word "attitude" in an effort to reduce demand characteristics. Similarly, the confederate's responses were identical for all subjects, except for the factor of directionality.

Four of the eight evaluative pairs, selected randomly, were critical, as were all the "buffer" pairs. That is, by pre-arrangement, the confederate moved in the desired direction over trials on these pairs, while his responses remained constant over trials on the non-critical pairs. To

prevent visual contact, the apparent experimenter and the confederate were separated by a screen.

Each of the 12 adjective pairs was typed on separate 3 x 5 cards. Which word of the pair appeared first on the card was determined randomly, as was the order of the cards. Each pair appeared five times, for a total of 60 trials. The apparent experimenter read the cards one at a time, beginning each time by saying "labor unions are....," and then reading the adjective pair. After each card, the confederate responded by indicating how closely related he supposedly thought labor unions were to one adjective or the other. Thus, the real subject was exposed to an elaborate differential reinforcement pattern in which he had little, if any, opportunity to remember what transpired on specific pairs. Following the presentation of the 60 cards, the confederate was dismissed. The real subject was then administered a written form of the differential, using the same 12 scales, under the guise of obtaining "background information." The sessions were concluded with an interview to determine awareness.

Since the "buffer" scales were included only to obscure the specific reinforcement contingency, statistical analyses were done only on the evaluative scales. These analyses indicated a significant difference between reinforced and non-reinforced subjects in the predicted direction. That is, attitude modification for reinforced subjects was evidenced by their higher cumulative attitude scores. Of interest, negative evaluative movement was significantly greater than positive evaluative movement. Also, within reinforced subjects, there was a large and reliable difference between scores on the critical and non-critical scales, with higher scores obtaining for the critical scales. The post-experiment interview data confirmed both the lack of awareness and the effectiveness of reinforcement

as reflected by the reinforced subjects' reported subjective feelings of "success" as an experimenter.

Thus, it was demonstrated that response-correlated reinforcement can be extended to attitude change. Of interest in itself, this result is seen as having several implications.

First, it suggests that response-correlated reinforcement may offer a viable alternative, or adjunctive, theoretical explanation for attitude change following role-playing. Frequently, such change has been explained in terms of dissonance theory. That is, the subject changes his attitudes to achieve consonance when a cognition about his behavior--for example, knowing he has publicly advocated a position to which he is opposed--produces dissonance with his cognition about his beliefs. Characteristically, however, as suggested in Festinger and Carlsmith's well-known study, reward is construed as justifying such dissonant behavior, thereby reducing the dissonance and the consequent necessity for attitude change. Yet, it was those subjects who did receive reward who showed attitude change in the present study. Another frequent explanation has been incentive theory, as advanced, for example, by Hovland, Janis, and King. Here attention is given to reinforcement but, characteristically, emphasis is also placed on the importance of the subject's generating arguments as requisite to effecting attitude change. In contrast, the present study involved minimal subject verbalization and no opportunity for him to improvise arguments, nor even really to be exposed to "rational" or "logical" arguments. Thus, it is suggested that two responses and two types of reinforcement, one of them previously unrecognized, may actually operate in role-playing attitude-change studies. One of these responses is that of effectively playing the role, on which reinforcement is contingent. The



other is observation of attitude change in the subject himself, with which reinforcement is correlated.

There are also paradigmatic implications of the present study which can provide resolution to some of the problems which Insko, for example, has said tend to characterize attitude change research. The design permits use of an assessment device widely recognized as being valid. By the use of appropriate control groups, it allows employment of a post-test only or after-only design. This is seen as helping to reduce demand characteristics, while avoiding the possibility that an interaction may occur between the pre-test and the experimental manipulation. Following Orne's recommendations, the post-experiment interview provides a means of assessing the subject's awareness of any such characteristics. Too, the present paradigm provides a way to manipulate the subject's behavior to determine the effects of such manipulation on his attitudes, rather than approaching the problem of the relation between behavior and attitude change by seeking first to manipulate attitudes.

Finally, demonstrating that response-correlated reinforcement can be extended to attitude change is seen as having "real-life" implications also. In the present study, the critical motive was to serve as a "good" experimenter, while the incentive was the performance of the other person--more specifically, the "movement" of the confederate. Appropriate manipulation of these motive-incentive variables did effect attitude change. It would seem that the various institutions of our society concerned with molding or modifying attitudes might profitably employ the principles underlying response-correlated reinforcement in their efforts. For example, our correctional and psychiatric settings, which are concerned with changing attitudes to oneself or to particular modes of adjustment,

might well give greater attention than they now often do to providing opportunities for their residents to behave in ways considered normal by the larger society--that is, to effectively manipulating motive-incentive variables to permit response-correlated reinforcement to operate.

Further research is indicated to determine the persistence of attitude change following response-correlated reinforcement. Too, the factor of directionality merits further investigation. Although a pre-study using different, but comparable, subjects had shown some negative bias toward labor unions, analysis indicated that this bias did not depart significantly from neutrality. Finally, since the present study did employ an essentially neutral attitude object, further research is suggested to determine whether response-correlated reinforcement per se is sufficient to effect change of counter-attitudes.